

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "10" has been used to designate both vent passage and valve. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: element (56) (as per page 23, line 7) and condensation chamber (57). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 4, 11, 20, 22, 31-45 and 49-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2, 20, 31, 33, 34, 37, 39, 40, 43, 49 and 50, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 2, 4, 11, 20, 22, 34, 39, 50, and 51, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim 13 recites the limitation "said turbine" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 31-45 recites the limitation "the liquid mixture" in claim 31, line 7. There is insufficient antecedent basis for this limitation in the claim.

Claims 46-51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 includes the limitation "means for re-using the purified water" in line 8, however there is insufficient antecedent basis for the limitation of "purified water" in the claim. The preamble supports a system for purifying gases, but there is no claim for a resulting purified water and thus to re-use purified water renders the claim indefinite.

Claim Objections

Claims 3 & 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10, 12, 16, 19-22, 30-35, 39, 44-48, 50 and 51 are rejected under 35

U.S.C. 102(b) as being anticipated by **Welden (6,820,818)**. **Welden** discloses a high efficiency hydronic heating system wherein steam which is produced from water, is mixed with exhaust gas from the direct fired steam generator (100) and are fed to a packed column cavity (105) providing heat to the packed column cavity which is a heat exchange system wherein heat is exchanged with cool water (SEE element 135) and the cooled vapors are exhausted via (14) for other uses; filtering is in the form of packing layers (125 & 130), a circulation pump (150), and a means (400) for re-using the liquid mixture includes a pipe configuration (SEE Figure 4).

Claims 1-5, 16, 19-22 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Masaki (4,461,223)**. **Masaki** discloses a method and system for producing moisturized hot air wherein steam (12) produced from water (9) is mixed with exhaust gas (4) produced from a burner (3) to make a mixture (5) which is used for heating purposes wherein the mixture is introduced into a cavity, place or plant (13) for heating (SEE column 2, lines 62-66), the fuel used is heavy oil, coal gas, liquid propane gas (SEE column 1, lines 60-62), the teaching of the temperature adjustment is found in column 2, lines 21-42.

Claims 1-4, 16 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by **GB 1449483**. **GB 1449483** discloses a steam cleaning system wherein

steam produced from water (8) is mixed with exhaust gas (7) from the combustion of fuel in combustion chamber (1) and the resultant mixture is used for steam cleaning (SEE Figure).

Allowable Subject Matter

Claims 23-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. Wilson whose telephone number is (571)272-4882. The examiner can normally be reached on 7 am - 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve McAllister can be reached on (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory A. Wilson/
Primary Examiner, Art Unit 3749
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